

Applicant No. : 09/751,240

In the Claims:

Claim 1 (twice amended). A power semiconductor element, comprising:

an emitter region;

a stop zone in front of the emitter region for preventing passage of an electric field to said emitter region at a reverse voltage;

said emitter region and said stop zone having mutually opposite conductivities; and

said stop zone having atoms of a doping substance determining a conductivity of said stop zone, said atoms of said doping substance having at least one energy level within the band gap of the semiconductor and at least 200 meV away from both a conduction band and a valence band of the semiconductor wherein a number of effective doping atoms generated in the stop zone changes in dependence on whether the power semiconductor element is in a blocking operation or in a conducting operation.

Claim 2 (amended). The power semiconductor element according to claim 1, wherein said atoms in said stop zone include sulfur atoms.

Claim 3 (amended). The power semiconductor element according to claim 1, wherein said atoms in said stop zone include selenium atoms.

Claim 4 (amended). A power semiconductor element, comprising:

an emitter region;

a stop zone in front of the emitter for preventing passage of an electric field to said emitter region at a reverse voltage;

said emitter region and said stop zone having mutually opposite conductivities; and

said stop zone containing foreign atoms selected from the group consisting of sulfur and selenium with at least one energy level within the band gap of the semiconductor and spaced at least 200 meV from a conduction band and a valence band of the semiconductor wherein a number of effective doping atoms generated in the stop zone changes in dependence on whether the power semiconductor element is in a blocking operation or in a conducting operation.